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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/070,862

07/08/2002

Dietmar Wolter

H01.2-10378

2627

490

7590

06/15/2006

VIDAS, ARRETT & STEINKRAUS, P.A.
6109 BLUE CIRCLE DRIVE
SUITE 2000
MINNETONKA, MN 55343-9185

EXAMINER

NGUYEN, TUAN VAN

ART UNIT

PAPER NUMBER

3731

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/070,862

Applicant(s)

WOLTER ET AL.

Examiner

Tuan V. Nguyen

Art Unit

3731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
4a) Of the above claim(s) 6, 7 and 16 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5, 8-15 and 17 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 08 July 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Amendment After Non-Final Rejection

1. According to the Amendment After Non-Final Rejection applicants filed on February 23, 2006, applicants ads new claims 15-17. Claim 16 is not read on the elected species, which is Species 1 of Figure 1, therefore, claim 16 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention. Now, claims 1-5, -15, and 17 are pending in this present application.

Response to Amendment

2. Applicant's arguments filed on February 23, 2006 with respect to claims 4 have been fully considered but they are moot in view of the new grounds of rejection.
3. Applicant's arguments filed on February 23, 2006 with respect to Drawing Objection have been fully considered and persuasive therefore, the objection to the drawing is hereby withdrawn.
4. Applicant's arguments filed on February 23, 2006 with respect to Claim Objection have been fully considered and persuasive therefore, the objections to the claims are hereby withdrawn.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. **Claims 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huebner (U.S. 6,001,099) and further in view of Pawluk (U.S. 4,955,886).**
8. Referring to **claims 4 and 15**, Huebner discloses (see Figs. 1, 3, and 4) a bone plate having holes 20c, 20b, and 20a disposed on one side of the fracture and another set of holes 20c, 20b, and 20a disposed on the other side of the fracture, the bone plate also has reinforcement disposed radially and longitudinally around the holes 20b and 20a, holes 20c, 20b, and 20a are adapted to receive fasteners. Huebner also discloses the distance between holes 20a and 20b and 20a' and 20b' are to be arranged longer than the distance between the holes 20b and 20c

and 20b' and 20c' for the purpose of distribution of the load. However, Huebner fails to disclose the reduction of the transverse extension of the hole of the bone plate and the area where the material the bone plate is carried of larger load.

Pawluk discloses (see Figs. 3 and 4) a bone plate having a dual-tapered width and thickness profile for varying plate cross section along the longitudinal axis away from the central portion. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made by the applicant to use the tapering of the thickness design, as disclosed by Pawluk, to incorporate into the bone plate, as disclosed by Huebner because this combination will allow the surgeon to prevent the fracture of the plate by distributing the load more equally to each screw than previously known plates as suggested by Pawluk (see col. 3, lines 20-25) yet still preventing the failure at the tip of the bone plate as suggested by Huebner (see col. 1, lines 50-55).

9. Referring to **claim 5**, it is rejected for the same reason as claimed 4.
10. **Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huebner (U.S. 6,001,099) further in view of Pawluk (U.S. 4,955,886) and further in view of Treace (U.S. 3,463,148).**
11. Referring to **claim 1**, Huebner as modified by Pawluk discloses the invention substantially as claimed except for the axes of the holes on both sides of the fracture are obliquely inclined toward each other. Treace discloses (see Figs. 3-5) a bone plate with holes are adapted to receive fastener wherein the holes axes are disposed obliquely inclined toward each other and the distal tip of the screw show

diverging on the side of the bone plate facing the bone. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made by the applicant to use the hole design, as disclosed by Treace, to incorporate into the bone plate, as disclosed by Huebner because this will allow the surgeon to deploy the fasteners at different angle relative to the bone plate surface to provide a better distribution of force to the bone because the bone is not always subjected to compression, tension forces it also subjected to torsional forces.

12. Referring to **claim 2**, Huebner discloses (see Figs. 2 and 4) the bone plate having varying rigidity that gradually transfers load from the bone to the bone plate without excessively weakening the bone near the ends of the bone plate (see col. 1, lines 51-54) therefore the width W1 between holes 20a and 20b is smaller than the width W2 between holes 20b and 20c and the distance S1 between the holes 20a and 20b is longer than the distance S2 between holes 20b and 20c. This is meant that the bridge 26 and the area around holes 20c has larger cross-section area than any other locations therefore has more strength than any other locations.
13. Referring to **claim 3**, Huebner discloses the invention substantially as claimed except for the reinforcing the bone plate at the desired location by thickening the thickness of the bone plate. Pawluk discloses (see Figs. 3 and 4) a bone plate having a dual-tapered width and thickness profile for varying plate cross section along the longitudinal axis away from the central portion. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made

- by the applicant to use the tapering of the thickness design, as disclosed by Pawluk, to incorporate into the modified bone plate, as disclosed by Huebner because this combination will allow the surgeon to prevent the fracture of the plate by distributing the load more equally to each screw than previously known plates as suggested by Pawluk (see col. 3, lines 20-25) yet still preventing the failure at the tip of the bone plate as suggested by Huebner (see col. 1, lines 50-55).
14. Referring to **claims 8-14**, they are rejected for the same reasons as claim 1.
15. **Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huebner (U.S. 6,001,099) further in view of Pawluk (U.S. 4,955,886) and further in view of Wagner et al. (U.S. 6,454,769).**
16. Referring to claim 17, Huebner as modified by Pawluk discloses the invention substantially as claimed except for the bone screws have a conical thread, which allow the threads to be turned in at different angular orientations, causing the bone screws to be fixed in the holes. Wagner discloses (see Fig. 9) bone screws have a conical thread 121, which allow the threads to be turned in at different angular orientations, causing the bone screws to be fixed in the holes 123 (see col. 2, lines 45-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made by the applicant to use the bone screws, as disclosed by Wagner, to incorporate into the modified bone plate, as disclosed by Huebner because this resulting in a stronger connection between the bone screws and the plate as suggested by Wagner (see col. 9, lines 30-40 and col. 2, lines 58-60).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan V. Nguyen whose telephone number is 571-272-5962. The examiner can normally be reached on M-F: 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anh Tuan Nguyen can be reached on 571-272-4963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan V. Nguyen
June 6, 2006



ANH TUAN T. NGUYEN
SUPERVISORY PATENT EXAMINER

6/12/06